

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 1

Item ID: D205-634-041

Accept



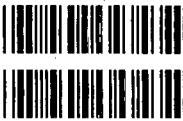
Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

*H*Date: *10-6-24*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2580	Rev D

100	0.00								
-----	------	--	--	--	--	--	--	--	--

DC	DOCUMENT CONTROL								
----	------------------	--	--	--	--	--	--	--	--

Document Control	Memo	0.00							
------------------	------	------	--	--	--	--	--	--	--

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-041 CHG002

*N/A  
ent w/o 59283*

110	0.00								
-----	------	--	--	--	--	--	--	--	--

CNC Bend 1	BENDING MACHINE - SKIDTUBES								
------------	-----------------------------	--	--	--	--	--	--	--	--

CNC Delta 100 Bender	Memo	0.00							
----------------------	------	------	--	--	--	--	--	--	--

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

*) M 10/7/11*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 2

Item ID: D205-634-041

Accept



Setup

Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run

Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120



Skidtubes

Memo

0.00

1

BE10/07/01

Skidtubes

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

130



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

S 1067105

60

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Page 3

Thursday, June 24, 2010 10:34:53 AM

Item ID: D205-634-041

Accept



Setup

Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start
	QC:	Date:	SPC (Y/N):	Date:	Stop	



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140



Skidtubes

Skidtubes

140	Skidtubes	Memo	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
-----	-----------	------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

0.00

0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
------	---------	--------	--------------	---------------	---------------	------------------	----------------

x1

BE 10/07/06

1-Weld step D2576 as per Dwg. D2580 and QSI 004  
A/R□□□ Aluminum Rod 1114242

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill  
A/R□□□ Aluminum Rod 1114242

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Deburr

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.  
Deburr holes

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 4

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberReject  
NumberInsp.  
Stamp

150



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

8/6/10

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8/6/10

QC

170



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd  
cap out of solution.

D BR 10-7-7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 5

Item ID: D205-634-041

Accept



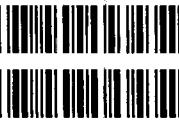
Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop


**Sequence ID/  
Work Center ID**

180



Powdercoat

Powder Coating

**Operation  
Description**

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

M14841

**Set Up/  
Run Hours**

0.00

Tool ID

Tool #

**Plan  
Code**
**Accept  
Qty**
**Reject  
Qty**
**Reject  
Number**
**Insp.  
Stamp**

190



QC

Quality Control

QC3- Inspect Part Finish

0.00

M 10 07 08

 Memo  
 START TIME: 9:00  
 OVEN TEMPERATURE: 320  
 FINISH TIME: 9:30

1 8 10 7 8

0.00

Memo

1 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 6

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC: \_\_\_\_\_

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200



HandFinish

Hand Finishing

0.00

0.00

7/11 10/07/13

X1 6

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of  
Sikaflex on insert holes before installing wearplatesA/R  Sikaflex-291  M1135709  
Sikaflex expire date: 10/142-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as  
per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with  
Sikaflex. Clean excess adhesiveA/R  Sikaflex-291  M1135709  
Sikaflex expire date: 10/145-Wing Walk as per Dwg D2580 and QSI 005 4.4  
Batch: 1A114432

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 60103**

Thursday, June 24, 2010 10:34:53 AM



Page 7

Item ID: D205-634-041

Accept



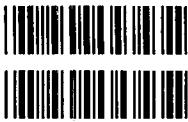
Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/24/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/8/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

6/24/13

FC

220



Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 1

Work Order ID: 60103



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2580-1



Manufactured

No

110

Each

5.0000



B59299 0 10/7/11

205 Skidtube bent detail

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	5	
57028	1	
59297	2	
59299	2	

D2576-3



Manufactured

No

140

Each

92.0000



Step (machining detail)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	92	
46661	44	
52215	48	

D2579



Manufactured

No

140

Each

353.0000



Crossbolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	353	
57052	5	
57348	4	
58433	54	
59113	290	

20 86 10/7/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 2

Work Order ID: 60103



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D2855



Manufactured No

200

Each

86.0000

1

1



Cap

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP6	2	
-----	---	--

56613	2	
-------	---	--

ST026	84	
-------	----	--

50513	1	
-------	---	--

50770	28	
-------	----	--

51539	2	
-------	---	--

53791	53	
-------	----	--

x1 M 10/07/08

AN3-5A



Purchased No

200

Each

1,303.000

2



Bolt

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST350	1303	
-------	------	--

105057	803	
--------	-----	--

115016	500	
--------	-----	--

x2 M 10/07/08

AN960JD10L



NAS1149D0332J Purchased

No

200

Each

3,437.000

2



Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST348	3437	
-------	------	--

110985	3437	
--------	------	--

x2 M 10/07/08

ALS7-1032-130



Purchased

No

200

Each

17.0000

50



Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST282	17	
-------	----	--

113238	17	
--------	----	--

M114725

x50 M 10/07/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 3 / 5

Work Order ID: 60103



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C4A



Purchased

No

200

Each

2,259.000

50

50



BOLT

Location	Loc Qty	Loc Code
ST350	2259	
114103	501	
114108	14	
114416	12	
114523	2	
114859	730	
114941	1000	

x50 46 10/07/08

AN960C10L



NAS1149C0332

Purchased

No

200

Each

0.0000

50

50

1115000



x50 46 10/07/08

washer

D3566-13



Manufactured

No

200

Each

14.0000

1

1

Gasket

Location	Loc Qty	Loc Code
FP	14	53461
	14	

x1 46 10/07/08

D3566-5



Manufactured

No

200

Each

24.0000

1

1

Gasket

Location	Loc Qty	Loc Code
FP015	24	57682
	2	59158
	22	

x1 46 10/07/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 4

15

Work Order ID: 60103



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D3566-1



Manufactured No

200

Each

25.0000

2

2



Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP015	25	
57715	2	
58182	1	
59126	22	

D3564-11



Manufactured No

200

Each

1.0000

1

1



Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP019	1	
59021	1	

D3564-13



Manufactured No

200

Each

8.0000

1

1



Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP17	8	
57922	8	

D3564-9



Manufactured No

200

Each

16.0000

1

1



Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1	
55334	1	
FP019	15	
57958	2	
59201	13	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, June 24, 2010 10:35:00 AM

Page 5

Work Order ID: 60103



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 6/24/2010

Required Date: 7/8/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-5



Manufactured No

200

Each

22.0000

1

1

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	1	
34806	1	
FP19	9	
57525	1	
68709	8	
FP-19	12	
59157	12	

D2594-3



Manufactured No

200

Each

539.0000

16

16

O-Ring, 205 Skidtube

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	539	
55546	19	
58191	28	
69358	492	

D2594-1



Manufactured No

200

Each

499.0000

16

16

Plug, 205 Skidtube

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	190	
42807	112	
55002	71	
57826	7	
FP14	309	
58434	120	
59110	189	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2580
		REV. D SHEET 1 OF 3
DATE		TITLE
07.02.27		205 SKIDTUBE ASSEMBLY
A	96.09.16	SCALE NTS
B	96.12.02	AS MANUFACTURED
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183

**RELEASED**  
07.06.28

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. CO103  
BD10-624

**Copyright © 1996 by DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

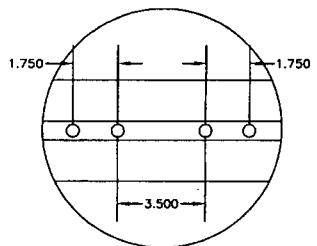
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

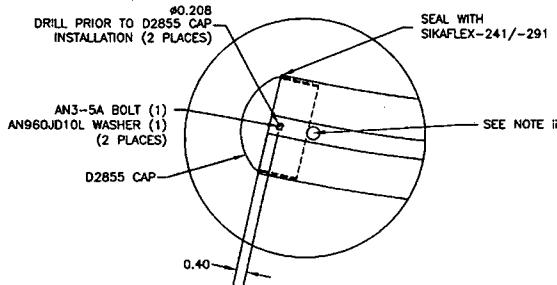
NOTE: Date & initial all entries

**DETAIL E**  
SCALE 5:24

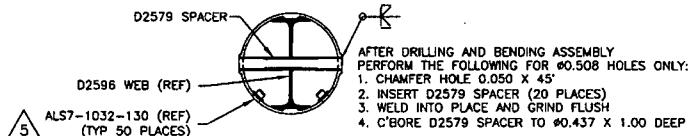


**RELEASED**  
07-16-28

**DETAIL G**  
SCALE 5:24



**SECTION H-H**  
SCALE 5:24

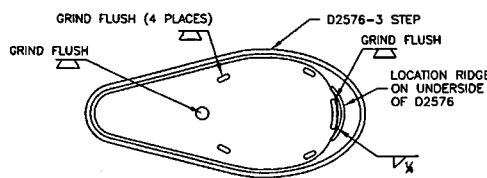


AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (20 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO 0.437 X 1.00 DEEP

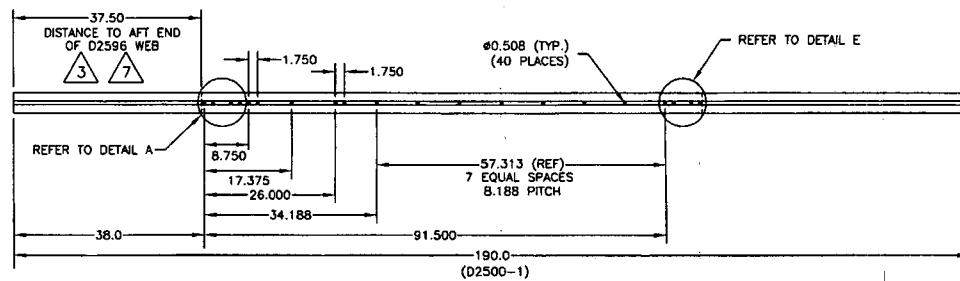
**D2580-045 NOTES**

- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION

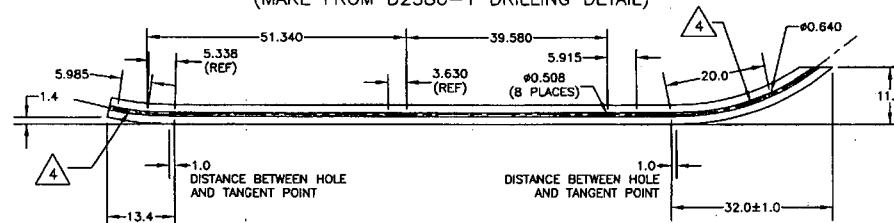
**DETAIL F**  
SCALE 5:24



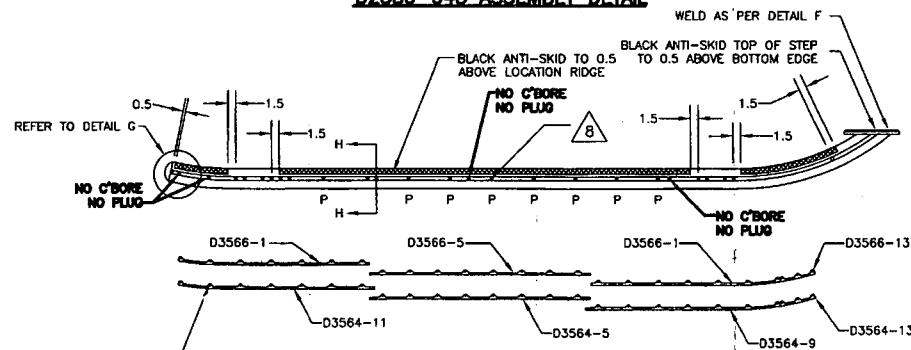
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(50 PLACES)

COPYRIGHT © 1995 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL  
AND IS SUPPLIED ON THE EXPRESS CONDITION  
THAT IT IS NOT TO BE USED FOR ANY PURPOSE  
OR COPIED OR COMMUNICATED TO ANY OTHER  
PERSON WITHOUT WRITTEN PERMISSION FROM  
DART AEROSPACE LTD.

DESIGN  
R4

CHECKED  
H

APPROVED  
H

DATE  
07.02.27

DRAWN BY  
R4

DRAWING NO.  
D2580

REV'D  
SHEET 3 OF 3

TITLE  
205 SKIDTUBE ASSEMBLY

DART AEROSPACE LTD.  
HAWKESBURY, ONTARIO, CANADA

1:24

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 232

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 59105  
Part number: D205-634-041  
Description: 205 skid tube  
Welding Process: Tig[] Mig[]  
Base material: Aluminium  
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]  
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]  
Undercut: pass[] fail[]  
Pin holes: pass[] fail[]  
Overlap (cold lap) pass[] fail[]  
Porosity (surface): pass[] fail[]  
Coloration: pass[] fail[]

Qualifier Barclay Elliott Date of Test Coupon 10.06.01

Welder Barclay Elliott Date of Test Coupon 10.06.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld